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#### **ABSTRACT**

An increase of human immunodeficiency virus (HIV) throughout the world cuts across age, ethnic, gender, and sexual orientation groups. It is imperative that people find out if they are carrying the disease. Many still continue to engage in high risk behaviors in ignorance, putting themselves and their partners at risk. The relationships among fear of Acquired Immune Deficiency Syndrome (AIDS), history of HIV testing, and anticipated HIV testing in the next 5 years, and their relationship to age, gender, ethnicity, and knowing someone who is HIV-positive or who has AIDS were examined among 131 undergraduate university students with an average age of 23.05 years. Fear of AIDS was related only to gender, replicating earlier findings that men have stronger fears. Whether or not the subject had been tested was related to history of high risk behaviors and knowing someone who was HIV-positive or who had AIDS. Estimated likelihood of being tested in the next 5 years was related to having been previously tested, engaging in high risk behaviors, and knowing someone who was HIV-positive or who had AIDS. Unfortunately, many subjects who reported engaging in high risk behaviors reported neither being tested nor an anticipation of being tested. Results suggest a strong need for expanded education on the array of high risk behaviors and the ethics of subjecting partners to the risk of infection. (Author)



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# HIV Testing Among College Students Daryl L. Hitchcock, Mary J.Allen, Judith A. Oliver, and Maria Vanoni California State University, Bakersfield

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#### **Abstract**

An increase of human immuno-deficiency virus (HIV) throughout the world cuts across age, ethnic, gender, and sexual orientation groups. It is imperative that people find out if they are carrying the disease. Many still continue to engage in high risk behaviors in ignorance, putting themselves and their partners at risk. The relationships among fear of AIDS, history of HIV testing, and anticipated HIV testing in the next five years, and their relationship to age, gender, ethnicity, and knowing someone who is HIV-positive or who has AIDS were examined among 131 undergraduate university students (46% female) with an average age of 23.05 years. Fear of AIDS was only related to gender, replicating earlier findings that men have stronger fears. Whether of not the subject has been tested was related to history of high risk behaviors and knowing someone who is HIV-positive or who has AIDS. Estimated likelihood of being tested in the next five years was related to being previously tested, engaging in high risk behaviors, and knowing someone who is HIV-positive or who has AIDS. Unfortunately, many subjects who report engaging in high risk behaviors report neither being tested nor an anticipation of being tested. Results suggest a strong need for expanded education on the array of high risk behaviors and the ethics of subjecting partners to the risk of infection.

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## HIV Testing Among College Students

AIDS first became identified by the Centers for Disease Control in 1981, when a number of requests for a drug to treat pneumocystis carinii pneumonia were received at the Center, and physicians in New York and San Francisco began seeing homosexual patients with Karposi's sarcoma. Batchelor (1988) and Curran, Morgan, Hardy, Jaffe, Darrow, and Dowdle (1985) have summarized the inception and course of the AIDS epidemic. The suggestion from both research studies is for more research and more understanding and, especially, more compassion in dealing with AIDS.

The first population noted for this disease was gay males. Speculation as to the cause of this malady ranged from their promiscuous lifestyles to an act of God. Gay males have a higher average number of sexual contacts than other groups (Haas & Haas, 1993), providing for its rapid spread through the gay male community. Public outcry for research strengthened when other groups became infected, such as hemophiliacs, intravenous (IV) drug users, and heterosexual men and women.

Fear of AIDS fostered an irrational prejudice towards the gay male, lesbian, and bisexual community. Bouton, Gallaher, Garlinghouse, Leal, Rosenstein, and Young (1987) recognized this and created two scales that contained both rational and irrational fears towards AIDS and homosexuals. They found a significant correlation between these scales, as did others that replicated their study (McDevitt, Sheehan, Lennon, & Ambrosio, 1990; Rienzi & Hitchcock 1992). Results were not consistent on whether gender affects fear of AIDS. Some studies found no differences between men and women on fear of AIDS (Bouton et al., 1987; Hendrickson, Kunkel, & Temple, 1992; Rienzi & Hitchcock, 1992), but others found men to be more fearful than women (Austin, Hong, & Hunter, 1989; McDevitt et al 1990; Negy & Webber, 1991; Young, Gallaher, Belasco, Barr, & Webber, 1991).

Bouton et al. (1989) also looked at the effects of other demographic variables on homophobia and fear of AIDS. They found that conservatives and protestants were the most homophobic and fearful of AIDS. They also found that people who know homosexuals had less homophobia and fear of AIDS. In our study we will look to see if knowing someone who is HIV-positive or who has AIDS affects fear of AIDS scores.

Fear of the disease can lead to blaming those that are infected. The concept is that there are innocent victims (babies, hemophiliacs, heterosexuals, etc.) and those who brought infection on themselves (gay males, lesbians, bisexuals, IV drug users, etc.). St. Lawrence, Husfeldt, Kelly, Hood, and Smith (1990), and Triplet and Sugarman (1987) found that homosexuals were more likely than heterosexuals to be perceived as responsible for their disease. Baer (1992) found that IV drug users are perceived as the most responsible for their disease, followed by homosexuals.

Negy and Webber (1991) examined the effects of ethnicity on knowledge and fear of AIDS and found no difference between Black and White students on knowledge of AIDS, but both were significantly more knowledgeable than Hispanic students. There was no difference in their fear scores. Crystal, Dengelegi, Beck, and Dejowski (1990) also looked at partners given as possible contacts by HIV-positive people. They found a relationship between ethnicity and the likelihood of getting the HIV test after being notified. White subjects were the most likely to get tested.

Fear of AIDS directly affects those who get tested for HIV. Perry, Jacobsberg, Fishman, Weiler, Gold, and Frances (1990) found that the anxiety of not knowing about infection is greater than the anxiety of being notified of an HIV-positive result. In spite of this,



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many people do not return for their HIV test results, perhaps allowing them to deny their possible HIV status (Catania, 1990).

In this study we are interested in examining the correlates of fear of AIDS, whether subjects had been previously tested for HIV, and reported plans to be tested for HIV in the next five years. We expect that age, gender, ethnicity, high risk behavior, and knowing someone who is HIV-positive or who has AIDS will relate to fear and previous and planned testing.

#### Method

There were 131 subjects (55 female with 9 subjects that did not specify their gender) with an average age of 23.05 years (<u>SD</u> = 6.35 years, with 3 subjects that declined to state their age). There were 62 Caucasian, 35 Hispanic-American, 10 African-American, 2 Asian-American, and 3 "others," with 17 subjects that did not state their ethnicity. After being approved by the Human Subjects Institutional Research Board (HSIRB), the researchers chose general education courses (communications, geology, biology, sociology, and math) to collect data. Subjects were administered surveys by one male and three female researchers who read aloud the informed consent form that each subject received with the surveys, instructing subjects on the confidentiality and privacy of their responses. After surveys were completed, subjects were told to turn them over, and surveys were collected and shuffled with the other classes, so that researchers could not identify individual subjects or classes of students. Subjects were then debriefed on the nature of the study and the hypotheses.

The subjects received two surveys. The AIDS survey is the fear of AIDS scale (FOAS) taken from Bouton et al. (1987). Items and their results are provided in Table 1. Subjects responded on a four-point Likert scale: completely agree, somewhat agree, somewhat disagree, completely agree. Their responses were scored from no fear (1) to high fear (4).

### Insert Table 1 about here

The HIV survey (see Appendix) asks about HIV test history and contains a modified scale (Crystal, Dengelegi, Beck, & Dejowski, 1990) requiring subjects to estimate the likelihood of getting the HIV test in the next five years. Questions 5 and 6 asked if subjects knew someone with HIV or AIDS.

#### Results

Only subjects that answered at least 12 of the 14 fear of AIDS questions were used in these analyses (n = 128-131). Correlations among FOAS, age, and planned HIV testing were not significant. Thirteen chi square tests examined the relationship between previous and planned HIV testing and between these variables and gender, age, ethnicity, high risk behavior, and knowing someone who is HIV-positive or who has AIDS. Five t tests compared the genders, previous HIV testing groups, high risk behavior groups, and knowing someone who is HIV-positive or who has AIDS groups on fear of AIDS. A one-way ANOVA compared the ethnic groups on fear of AIDS. The overall pattern of results is reported in Table 2.

Insert Table 2 about here



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Only one of the eight examined variables, gender, was significantly related to fear of AIDS. Men ( $\underline{M} = 2.55$ ,  $\underline{SD} = .45$ ) scored significantly higher than women ( $\underline{M} = 2.37$  ( $\underline{SD} = .40$ ) on the FOAS.

Previous HIV testing was significantly related to planned HIV testing, age, high risk behavior, and knowing someone with HIV. Of subjects who had previous HIV testing ( $\underline{n}$  = 30), 57% planned testing again, but 34.% of those who did not have previous testing planned future testing. Age was dichotomized by its median (20.5). Thirty-three percent of the older group ( $\underline{n}$  = 66) had previous HIV testing and 12.9% of the younger group had previous testing. Of subjects reporting high risk behaviors ( $\underline{n}$  = 35), 37% had previous HIV testing, and 17% of those who do not report high risk behaviors had previous testing. Of those who know someone with HIV ( $\underline{n}$  = 33) 42.% had previous HIV testing, and 16% of those who do not know someone with HIV had previous testing.

Planned HIV testing was trichotomized into those who said they would definitely be tested or would strongly consider it, those who said it was a possibility, and those who said it was doubtful or would definitely not occur. Planned HIV testing was significantly related to high risk behavior and knowing someone who is HIV-positive or who has AIDS, as well as previous HIV testing as discussed above. All of the subjects who report high risk behaviors planned further testing, but 85 (56%) of the subjects who do not report high risk behaviors planned testing. Twenty-five (76%) of the subjects who know someone that is HIV-positive planned testing, but 90 (68%) of the subjects who said they don't know someone that is HIV-positive planned testing. Nineteen (76%) of those who know someone with AIDS planned testing, but 90 (68%) of those who do not know someone with AIDS planned testing.

For exploratory analyses subjects' ethnicities were divided into four groups: Caucasian; Hispanic-American; African-American; and other (including Asian-American, Native American, and "other"). Ethnicity was not significantly related to fear of AIDS or past or planned HIV testing.

### Discussion

Our findings that men are more fearful of AIDS than women are consistent with several other studies (Austin, Hong, & Hunter, 1989; McDevitt et al., 1990; Negy & Webber, 1991; Young, Gallaher, Belasco, Barr, & Webber, 1991). It was surprising that other variables (e.g., a history of HIV testing and high risk behaviors) were not related to Fear of AIDS, suggesting a problem with the FOAS. This scale contains both fears that can be considered irrational (e.g. I am worried about catching AIDS in a public restroom) and rational (e.g. AIDS will become a severe and widespread epidemic). Perhaps separate scales or further refinement is necessary.

There were significant relationships between previous HIV testing and planned HIV testing, high risk behaviors, and knowing someone who is HIV-positive or who has AIDS. Those who had engaged in high risk behaviors were more likely to have been HIV tested and to get HIV tested in the future. Those who know someone who is HIV-positive or who has AIDS were also more likely to plan future HIV testing. It is refreshing to see those who have seen the effects of this horrible disease or know that they have engaged in high risk behaviors are more willing to get the HIV test that may help stop the spread of this disease.

It was interesting that there were no ethnic differences on fear of AIDS and HIV testing because the Hispanic- and African-American communities have such fast growing incidence rates (Haas & Haas, 1993). Perhaps there was insufficient ethnic variability to provide powerful tests of this variable. More research needs to be done with larger samples to see if



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the ethnic minorities are aware of the danger they are in and if they are taking preventative measures.

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# Appendix

## **HIV-TESTING SURVEY**

Gender: Male	Female	Age:	Major	
Ethnicity:				
Marital Status: S	Single Marrie	ed Divorced	Separated	Widowed
Other (please specif	fy)	<del>-</del>		_
1.) Have you ever	been tested for the	HIV virus?	es No	<del></del>
- - - -	Definitely Will strongly o It's a possibili It's doubtful ti I definitely wi	consider it ty nat I will choose to g Il not be tested.		
3.) Please explain	the reason(s) for y	our answer to Quest	ion #2 in the following	g space.
4.) A number of b	ehaviors have beer	n associated with an getting blood transfu	increased risk of HIV	/ infection, including unprotected eedles for IV drug use. Have you ——
5.) Do you know :	someone who is HI	V positive?	Yes	No
6) Do vou know :	someone who has A	NDS?	Yes	No



Table 1
Descriptive Statistics on Responses to the AIDS Survey

			Descriptive statistic		
Question		n	Median	<u>M</u>	SD
1.	I wouldn't mind being in the same				
_	room with a friend who had AIDS.	131	1.00	1.53	.81
2.	A centralized file containing all the				
	names of all those people to have				
•	the AIDS virus should be created.	130	3.00	2.60	1.15
3.	If I found out a friend had AIDS, I	404	4.00		
	would be afraid to touch him/her.	131	1.00	1.74	.92
4.	I would object to sending my non-				
	infected child to a school which had	100	0.00	0.44	4.04
E	a child who has AIDS.	130	2.00	2.11	1.01
5.	I believe public officials when they				
	say AIDS cannot be transmitted	131	2.00	1.00	1.00
6	through casual contact. I am afraid that I will get AIDS.	128	2.00	1.99 2.34	1.08
6. 7.	AtDS children should be allowed	120	2.00	2.34	1.08
1.	to attend public school.	128	2.00	1.84	.89
Ω	Compared to other public health	120	2.00	1.04	.03
U.	problems, I think that AIDS is a				
	very minor problem.	131	4.00	3.80	.57
g	If I found out my lover had AIDS, I	101	4.00	5.00	.01
0.	would still have sex with him/her.	131	4.00	3.50	.90
10.	The seriousness of AIDS is greatly	101	4.00	0.00	.00
٠.	overblown by the media.	131	4.00	3.37	.91
11.	AIDS will become a severe and	101	4.00	0.01	.0 .
	widespread epidemic.	126	4.00	3.48	.80
12.	I am worried about catching AIDS in	3		0.10	
	a public restroom.	131	2.00	1.89	.97
13.	Even if a friend had AIDS, I wouldn't	, • .			
	mind touching him/her.	131	1.00	1.66	.85
14.	If I found out a friend had AIDS, I		_		
	wouldn't be afraid to kiss him/her.	129	3.00	2.77	1.01



Table 2

Relationships Between Variables

	Criterion				
Predictor	FOAS	Previous HIV testing	Planned HIV testing		
FOAS		<u>t</u> (127)=.14	<u>r</u> =01		
Previous HIV testing	<u>t(127)=.14</u>		$\chi^2(1,\underline{n}=129)=8.45^*$		
Planned HIV Testing	<u>r</u> =01	$\chi^2(1,\underline{n}=129)=8.45^*$			
Age	<u>r</u> =06	$\chi^2(1,\underline{n}=128)=7.44^{**}$	$\chi^2(2,\underline{n}=127)=5.61$		
Gender	<u>t(</u> 119)=2.27*	$\chi^2(1,\underline{n}=122)=.79$	$\chi^2(2,\underline{n}=121)=1.33$		
Ethnicity	<u>F</u> (3,110)=.18	$\chi^2(3,\underline{n}=114)=.40$	$\chi^2(6,\underline{n}=113)=4.66$		
High risk hehavior	<u>t</u> (46)=.01	$\chi^2(1,\underline{n}=125)=6.08^*$	$\chi^2(1,\underline{n}=124)=31.08^{***}$		
Know someone with HIV	<u>t</u> (42)=.26	$\chi^2(1,\underline{n}=130)=9.33^{***}$	$\chi^2(1,\underline{n}=129)=7.82^*$		
Know someone with AIDS	<u>t</u> (28)=.04	$\chi^2(1,\underline{n}=130)=2.91$	$\chi^2(1,\underline{n}=129)=6.33^*$		

<sup>\*</sup>p<.05. \*\*p<.01 \*\*\*p<.005. \*\*\*\*p<.0001.

